Recent American and Foreign Patents.

NEW MECHANICAL AND ENGINEERING INVENTIONS.

IMPROVED SPLIT WHEEL.

Benjamin T. Mills, Fall River, Mass.—This consists in slotting or notching a wheel from the center to the circumference to admit of placing it upon the shaft, and in cutting a dovetailed groove in each side of the notch thus formed. A section of the wheel is made to fit the said notch and the grooves. The object is to furnish a wheel that may be applied to or removed from shafts where it would be inconvenient or impossible to place a wheel of ordinary construction.

IMPROVED WATER TUBE AND CIRCULATING STEAM BOILER.

William Ord, Brooklyn, O.—This consists of the combination of a tubular or other boiler and its mud drum, having side extensions toward the fire-front, with tubes that extend from the side extensions backward and enter the boiler at the rear end, just below the water line. The tubes are connected at the rear end with drop tubes and a receptacle for collecting the scale or sediment.

IMPROVED ATTACHMENT FOR RAISING AND LOWERING RUDDERS.

William J. Bushall and Thomas E. Parkin, Beaufort, N. C.—Thick plates of metal are bolted on to the stern post. The space between the plates forms a dovetail, into which is fitted, on guides, a movable part of the stern post, to which the rudder stock is attached in the ordinary way. A suitable pin prevents the plates from spreading, and also holds the rudder down. It is designed to have the spare rudder which the vessel will carry provided with a duplicate of the movable part of the stern post, and also with the appropriate steering gear, so that in case of emergency no time need be lost in applying these parts.

IMPROVED WATER-PUMPING APPARATUS.

John B. Comstock and William Niemann, New Orleans, La.—This is an improved apparatus for pumping water, to drain and to irrigate land, so constructed that the pumped water may assist in working the pump. When the weight has been wound up and released, its downward pressure will work the pumps, which discharge their water into the tank. When the tank is full, a stopcock in the discharge pipe is opened, and the water is discharged upon the buckets of the wheel, so that the pumps may be worked by the water raised by said pumps, the weight assisting and regulating the motion.

IMPROVED TURBINE WATER WHEELS.

James Andrews and William Brown, Thomaston, Ga.—This wheel, having spiral buckets and diagonal apertures in the top of the casing, will, it is claimed, yield a greater percentage of power than other turbines.

IMPROVED TIRE-HEATING DEVICE.

Charles O. Gause, Hesper, Kan.—As heretofore constructed, the fronts or doors of tire heaters of the class to which this belongs have been hinged at the side, and thus adapted to swing horizontally, and the wheel, or other device, for supporting the tire while being heated has been attached to the back of the furnace or heater. The present inventor improves on this by hinging the front or door of the heater at its lower edge, and also pivoting the tire-holding wheel to said front, so that the latter may be turned down, together with the tire wheel, and allowed to rest, in a nearly horizontal position, on the forge or furnace. The tire or tires may be easily applied to or removed from the wheel while in this position.

IMPROVED SCREW PROPELLER.

William S. Hull, Jackson, Miss.—This invention relates to a novel construction of propeller designed to secure a greater driving capacity with a smaller expenditure of power, and adapted to operate either upon the air or water as a fulcrum. The invention consists in a set of right angled triangular vanes, blades, or fans, one side of each of which blades is attached to the propeller shaft at right angles thereto, while the rear and less acute apices are deflected away from the said shaft, the laterally projecting tapering blades, thus constructed and arranged, serving to distribute the work in ratio corresponding to the leverage throughout the length of the blades, and thus securing a greater motive effect from a smaller expenditure of power.

NEW MISCELLANEOUS INVENTIONS.

IMPROVED ARTIFICIAL FEATHER.

Julius Brown, New York city, assignor to himself and Moritz Leipziger.—Pieces of downy fur are attached to sheets of india rubber, which are cut in proper shape to resemble feathers, and provided with wires or whalebones to imitate the quills.

IMPROVED FLOWER FRAME.

Charles S. Archer, Hanover, Ind.—This consists of an outer perforated section in connection with an interior section or core of corresponding shape secured thereto, the whole being closed by a bottom part to retain moistened sand placed between the outer and inner sections.

IMPROVED HINGED SPLINT.

George S. Adams, Philadelphia, Pa.—By means of an ingenious arrangement of screws this splint may be easily and gradually extended and contracted, as may be required, and may be adjusted to the right or left, as the angle of the limbs may require.

IMPROVED LABEL HOLDER.

Samuel A. Hughes, Brooklyn, N. Y.—This consists of a metal frame with raised guide moulding, open at one side for the card, which is retained by a spring-acted bottom plate, and locked by a suitable spring catch or device.

IMPROVED DEVICE FOR MUSICAL INSTRUCTION.

Russell S. Hill, Industry, Ill.—This consists of a board frame with a strip of woven wire, or other equivalent substance of dark color, nailed on a little in advance of light lines, representing the lines of the staff, together with movable notes and other characters to be used in teaching the principles of vocal music. It contains all the advantages of the blackboard, while it is more easily handled.

IMPROVED RECORDER.

Nicholas Van Rees, Philadelphia, Pa.—This is a device to be used by a bartender to register his sales as they are made, so that the proprietor can know by examining the register how much money there should be in the drawer.

IMPROVED LINE FASTENER.

David H. Levy, New York city, assignor to himself and George W. Gumpert, of same place.—This consists in making the sheave bolt of a block revolve with the sheave, and attaching a crank handle to one of its ends.

IMPROVED HYPODERMIC SYRINGE.

Joseph McMorries, Newberry, S. C.—This is an improved construction of hypodermic syringes, by which subcutaneous injections may be made in a very convenient and painless manner, as the injection is made simultaneously with the entrance of the needle. The invention consists of a syringe with hollow plunger rod for guiding the needle rod, both rods being connected to spring-acted plunger rods of tubular side casings, and retained by spring-acted triggers. They are simultaneously released for jointly entering the skin and injecting the liquid.

IMPROVED MOUSING HOOK.

Amon W. Chilcott, Cassville, Pa.—This is a lever hook fastener, for attaching traces to hames, connecting reins with bridle-bits, uniting railroad signal cords, also for atttaching watch chains to watches, and for similar purposes. It consists of two fulcrumed lever hooks that are applied by perforations of the overlapping plates at one end to the trace, chain, or strap, and at the other end by overlapping hooks to the ring or eye. The hook ends and upper plates are being recessed to one half the thickness of their shanks at the fulcrum to form a mousing hook when closed, and are readily spread open on being detached.

IMPROVED LINE FASTENER.

Jasper T. Cronk, Hoboken, N. J.—This consists of a clothes-line-supporting arm or brace, that is secured adjustably to brackets of the window casing, and slid to the outside when the clothes are applied to or taken off the clothes-line. The slack of the line is taken up by attaching the lower part of the line to a hook below the sockets.

IMPROVED HARNESS SADDLE.

Samuel E. Tompkins, Sing Sing, N. Y.—This saddle is so constructed that the jockey-flap and pad parts may be made and attached to the bearing plates, and the saddle-tree afterward attached to said bearing plates. With this arrangement the saddle-tree need not be soiled or marred by handling in making the saddle, as is usually the case.

IMPROVED WATERING TROUGHS.

Frank A. Coffman, Tipton, Iowa.—This is a trough for watering stock, which is so constructed that the water can be readily poured out of it in winter to prevent it from becoming filled with ice. It is tilted or tipped over to discharge its contents, and again raised into position, when required, by operating a suitable lever.

IMPROVED TOY PICTURE.

Joseph Kayser, New York city.—This relates to improvements in the construction of the surprise picture applied to paper boxes and other articles, for which letters patent have been granted to same inventor under date of April 18, 1876, and No. 176,228, so that more than two pictures may be instantly and successively changed thereon in a very neat and amusing manner.

IMPROVED POCKETBOOK LOCK.

Franz F. Weiss, Jersey City Heights, N. J.—This device may be readily opened and closed by simple pressure on the lock with one hand only, so as to be conveniently used by ladies. It consists of a slide plate that moves along inclined guides of a top plate, and withdraws a spring plate with a projecting bolt from the socket fastening of the flap.

IMPROVED ANILINE DYE.

Lewis Leigh, Pittsfield, Mass.—This is a solid block or cake, consisting of soap, gelatine, and an aniline dye, the whole soluble in water, and capable of imparting a fixed color to fabrics.

IMPROVED AUTOMATIC TOY.

William Maguire, Jersey City, N. J., and Julius Gallot, New York city.—This is an improved automatic toy, that represents two boxers, or other figures, in the act of boxing or fighting; and it consists of two figures, with movable bodies and arms, operated by connecting rods, the bodies being made to oscillate more or less on the fixed legs by spring-acted main rods, that are actuated by a clock train, with irregularly spurred cam wheels.

IMPROVED HARNESS BUCKLE.

Manuel Huerta, The Dalles, assignor of two thirds his right to N. W. Chapman, of same place, and Victor Trevett, Portland, Oregon.—This is an improved fastener or buckle for fastening together the straps of the various parts of a harness, to avoid sewing and the use of ordinary buckles. It enables a harness to be made cheaper, to be easily repaired, and to be readily taken up and let out.

IMPROVED FOUNTAIN PEN.

Philip Goehring, Richwood, O.—A tube or feeder passes longitudinally through the holder. Through it the ink passes to the pen. The holder is inserted in the lower end of a hollow piston, which enters the ink reservoir. A small air hole in the ink reservoir admits air to regulate the flow of the ink.

IMPROVED SHOVEL.

Patrick C. Kierns, New York city.—This consists in providing a tang or extension on the upper end of the shovel blade, that is received by a split handle, which extends a short distance over the sides of the upper portion of the shovel blade, and which is covered and reinforced by triangular plates riveted to said blade. The tang being covered with wood is thus rendered more agreeable for use in cold weather; and as the outside strap is dispensed with, the handle is smooth throughout its entire length.

IMPROVED MARKING BRUSH.

James M. Patterson, Euchee, Tenn.—By pressing upon a spring with the finger or thumb, a lever raises a valve and allows the ink to flow to the hair of the brush.

NEW AGRICULTURAL INVENTIONS.

IMPROVED HORSE HAY RAKE.

John L. Wager, Deposit, N. Y.—This is a wire-toothed horse hay rake, which is so constructed that the teeth are firmly held in place, and at the same time are secured in such a way as to give them the necessary play, and allow them to be easily and quickly detached when desired.

IMPROVED SULKY PLOW.

Mercer Brown, St. Joseph, Ill.—This machine is so constructed that the plow may be easily and conveniently raised out of the ground, and may be turned upon the share or upon the bar without being swung to or from the land. The wheels may also run over corn ridges or other uneven ground without raising the plow when the wheels rise, or forcing it down when they descend.

IMPROVED HARVESTER.

William Gangwer, Mulberry, Ind.—This harvester is so constructed as to enable the cut grain, as it falls upon the platform, to be conveniently removed and deposited in gavels in a receiver, and compressed, ready for binding. Suitable devices enable the bound bundles to be readily thrown from the machine.

IMPROVED BEEHIVE.

Hiram Hatfield, Ossian, Ind.—This beehive is so constructed as to prevent the moth from entering, and is thoroughly ventilated. The honey boxes or drawers may be arranged, exchanged, and removed, without danger to the bees or to the operator.

IMPROVED PLOW.

William T. Cheatham, Rienzi, Miss.—In this improvement the plows may be set at any desired distance apart, or be reversed. The device may be used with one, two, or three plows, as may be desired.

IMPROVED RECIPROCATING CHURN.

Peyton W. Gum, and William H. Seawell, Strasburg, Mo.—This churn has a long shallow body provided with a detachable perforated board in its center, pivoted to a frame, and connected at one end by a rod with a treadle. By operating the treadle the churn body is rocked upon its pivots, forcing the milk from one end of the said churn body to the other through the holes in the plate, and bringing the butter in a short time.

IMPROVED CORN PLANTER.

Alpheus Fox, Rock Falls, Ill.—The passages formed in the forked conductors are continued separately nearly to the bottom of the boot or leg of the planter, where they are stopped by an inclined bottom piece, and provided with a slide valve, which, moved up and down, will drop corn alternately from one and the other of the passages in the boot. This valve is connected to a crank pin projecting from a segmental pinion placed on a short shaft, which also supports the disk inside of the seed box. A bar is provided that gives motion simultaneously to the segmental pinions. A new mode of constructing the frame is also embodied.

IMPROVED FENCE POST.

Harrison Fitts, Rollin, Mich.—This consists in forming a hollow iron post flat on one side and cylindrical on the other, and providing it with a foot having the shape of a cross. The semi-cylindrical form of the post secures maximum strength with minimum weight, and avoids any considerable projection of one side of the post beyond the side of the fence.

IMPROVED GATE.

Jonathan Sowerby and Henry Deck, Rockford, Mich.—As the gate is pushed back or open, the wheels upon it roll up an inclined bar, and at the same time keep the gate in horizontal position. As the gate is released, its weight causes the wheels to roll down the inclined bar, and the gate closes itself.

NEW HOUSEHOLD INVENTIONS.

IMPROVED PIANO STOOLS.

George A. Ramseyer, New York city.—Of the two inventions, the first has a hollow post strengthened by an interior metallic tube that is attached by a screw nut to a socket of the base. The center screw post of the seat is threaded at the lower part, and of cylindrical shape at the upper part, to be simultaneously screwed into a nut of the tube, and guided by the same. The parts may be conveniently separated and packed into compact space for shipment. The second invention provides an improved piano stool supported on two posts or pillars, that is adjusted into higher or lower position by side buttons and simple mechanism placed entirely out of sight.

IMPROVED BIRDCAGE SCREEN.

Gilbert W. Chapin, Brooklyn, N. Y.—The frame is made in two parts of V-shaped wires hinged together. Upon the wires strips of gauze or tarletan are attached. The device fits around the bottom of a birdcage and prevents the scattering of seed upon the floor beneath.

IMPROVED COVER FOR SPRING BED BOTTOMS.

Kortum K. Peck, Faribault, Minn.—This is an improved cover for spring bed bottoms, made in two parts, hinged to each other. Each half is formed of two side pieces, two end pieces, and intermediate cross slats. The cover is placed upon the springs of the bed bottom, and is stiff enough to be kept from sagging between said springs, and at the same time is elastic enough to accommodate itself to the yield of the springs.

IMPROVED BURGLAR ALARM.

Daniel Mersereau, Newark, N. J.—In using the device a slide is pushed forward, and a spring wound up. The teeth are inserted in the floor in such a position that the case may stand in an inclined position, with its upper end resting against the door to be protected. If, now, an attempt be made to open the door, the case will be pressed downward upon the slide which withdraws a stud from an escapement, and allows the alarm mechanism to operate the hammer to sound an alarm, while at the same time the device prevents the door from being opened. In the case of a window the device is connected with the upper and lower sashes in such a way that the movement of either sash may move the case and slide upon each other and sound the alarm.

IMPROVED PETROLEUM STOVE.

Fredrick Hildebrandt, New York city.—This relates to improvements in the burner of lamp for petroleum cooking stoves, by which the oil vapors are conducted from the interior of the oil reservoir to the flame for complete combustion, and in which the spur wheels for operating the wicks are arranged at the interior of the reservoir, so as to present a smooth top surface, which may be kept clean with greater ease.

IMPROVED LAMP WICK.

Walter F. Hopkins, Cincinnati, O.—This extension lamp wick is so constructed as to afford a good light when the wick is short and the oil low. A set of loose wicks are connected with the wick to be burned, and serve to keep the burning wick supplied with oil until all the oil in the lamp shall be consumed, however short the said wick may be.

NEW WOODWORKING AND HOUSE AND CARRIAGE BUILDING INVENTIONS.

IMPROVED EXCURSION WAGON.

Elisha Mills, Lexington, Mich.—This consists of a wagon body for excursions, constructed of an outer main frame, supported and attached to lateral pieces, which rest on longitudinal spring boards. The spring boards rest on bolsters of the truck, which keep the main frame, by uprights passing into recesses of the same, in steady position thereon. The seat supports are applied to central longitudinal spring boards, attached to the top of the lateral pieces carrying the seat spring boards and the back rest boards, which is secured to the driver's seat and a rear head piece.

IMPROVED WHEEL FELLY.

Edward P. Hood, New Boston, Mass.—The ring plates are made open, and with a splice or lap, to enable the shrinkage of the tire to bring them down firmly upon the spokes.

IMPROVED GUIDE FOR SAWING MACHINES.

Cornelius R. Blauvelt, Newark, and Peter V. V. Sage, East Orange, N. J.—This is an improved device for holding work while being mitered or beveled, which may be quickly and firmly secured to the table, readily adjusted for any thickness of wood, and to any style of table, which will allow the table to remain horizontal, so that there will be no extra strain upon the saw, which may be readily adjusted to bevel the wood at any desired angle.

IMPROVED BLIND SLAT ADJUSTER.

Hermann H. Cammann, New York city.—This consists of two arms jointed together, and provided with a notched segment and a spring bolt or detent, and jointed to a plate attached to the lower rail of the blind, and to the rod that operates the slats. By this device the slats may be placed and retained in any desired position.

IMPROVED MACHINE FOR SAWING AND BORING WOODEN BLOCKS.

Fred T. Stevens and James O. Stevens, Coos, N. H.—This is a combination of a clamping device for holding the wood while being sawed and bored, and grooved rollers, acting intermittingly, for feeding the bar of wood to the machine. There is also a swinging saw for cutting off the blocks, and a sliding boring mandrel, that is moved up at the proper instant for boring the block. The various parts are operated by cams and levers.

IMPROVED SASH CORD FASTENER.

Charles Hintzman, New York city.—This consists of a detachable socket, secured to the sash by a single screw near one end, and at the other by two lips, that project under a lock plate.

IMPROVED COMPOSITION FOR VENEERS.

Charles H. Land, Detroit, Mich—This composition is capable of vulcanization in the finishing process. It consists of whiting, linseed oil, rubber, turpentine, and sulphur.